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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/531,580 | 04/18/2005 | Kouji Matsushima | 1752-0171PUS1 | 4955 |

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| EXAMINER |
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MERTZ, PREMA MARIA

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| ART UNIT | PAPER NUMBER |
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1646

| SHORTENED STATUTORY PERIOD OF RESPONSE | NOTIFICATION DATE | DELIVERY MODE |
|----------------------------------------|-------------------|---------------|
| 3 MONTHS | 12/28/2006 | ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 12/28/2006.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

| | | |
|--------------------------------------|------------------------------------------|--|
| Application No. 10/531,580 | Applicant(s) MATSUSHIMA ET AL. | |
| Examiner Prema M. Mertz | Art Unit 1646 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 October 2006.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 20-29 is/are pending in the application.
4a) Of the above claim(s) 20-23 and 28 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 24-27 and 29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/18/05, 8/28/06, 4/25/06.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

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DETAILED ACTION

Election/Restrictions

1. Applicants election with traverse of Group II (claims 24-27 and 29) on 10/16/2006 is acknowledged. The traversal is on the ground(s) that the restriction is improper because the reference upon which the Examiner bases the allegation of the lack of a special technical feature in fact does not disclose that which is the special technical feature because Bernstein et al do not disclose that BB-10010 has an activity of "elevating a dendritic cell precursor in the blood" as presently claimed. However, contrary to Applicants arguments, the Bernstein et al reference teaches administering BB-10010. It would be an inherent property of the administration of BB-10010 to elevate dendritic cell precursor level in a patient.

The Groups as delineated in the restriction requirement 9/15/2006 are patentably distinct one from the other such that each invention could, by itself, in principle, support its own separate patent (as shown by the arguments put forth in the written restriction requirement).

The requirement is still deemed proper and is therefore made FINAL.

Claims 20-23, 28 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Furthermore, the election of species requirement is being withdrawn and both species recited in claim 28 will be examined.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. It is suggested that the title be amended to recite the method being claimed.

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Claim Rejections - 35 USC § 112, second paragraph

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 24-27, 29, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 is rejected as vague and indefinite for several reasons.

Claim 24 is vague and indefinite because it recites "a dendritic cell precursor level". It is unclear whether this term encompasses immature dendritic cells as well as dendritic cells that are at various stages of maturation. Appropriate correction is required to recite a term in the claim for which there is support in the instant specification.

Furthermore, claim 24 is vague and indefinite because it fails to recite the condition or disease to be treated.

Claim 24, line 3, is also vague and indefinite because it recites "a functional derivative". The metes and bounds of this term are unclear. It is suggested that the claim be amended to recite that the derivative of MIP-1 α is BB-10010, so as to obviate this rejection.

Claims 25-27 and 29 are rejected as vague and indefinite insofar as they depend on claim 24 for its limitations.

Claim rejections-35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 24-25, are rejected under 35 U.S.C. § 102(b) as being anticipated by Bernstein et al. (1997).

Bernstein teaches a method of treating myelosuppression caused by chemotherapy patients with malignant lymphoma or breast carcinoma, by administering BB-10010 (see abstract; see page 889, column 1; see Table III, column 1, page 893).

“When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.” In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 562 F.2d at 1255, 195 USPQ at 433. See also Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See also In re Ludtke, 441 F.2d 660, 169 USPQ 563 (CCPA 1971).

The Bernstein reference teaches the administration of BB-10010 (see abstract). Since the instant claims fail to recite the disease condition to be treated or that the patient is suffering from a particular disease, the method disclosed in reference meets the limitations recited in claims 24-25.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 26-27, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernstein et al. (1997) in view of Shadle et al (U.S. Patent No. 4,847,325).

Bernstein et al. teach all that is recited above (see paragraph 4) except they do not explicitly teach administering BB-10010, which is chemically modified with an amphipathic polymer such as polyethylene glycol.

Shadle et al teach the site-specific attachment of a water-soluble polymer, PEG to M-CSF and report that such a modification increases the circulating half-life and immunogenicity of the conjugated M-CSF (see column 1, lines 14-17; column 4, lines 15-20).

Therefore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, to modify the BB-10010 composition as taught by Shadle et al, and administer the composition in the method of Bernstein since Shadle et al teaches the expected advantages of PEGylation including increased serum half-life of the resulting modified protein.

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Conclusion

No claim is allowed.

Claims 24-27, and 29, are rejected.

Advisory Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prema Mertz whose telephone number is (571) 272-0876. The examiner can normally be reached on Monday-Friday from 7:00AM to 3:30PM (Eastern time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol, can be reached on (571) 272-0835.

Official papers filed by fax should be directed to (571) 273-8300. Faxed draft or informal communications with the examiner should be directed to (571) 273-0876.

Information regarding the status of an application may be obtained from the Patent application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prema Mertz
Prema Mertz Ph.D., J.D.
Primary Examiner
Art Unit 1646
November 29, 2006